

**What is Claimed is:**

1. A row redundancy circuit comprising:

a fuse box group array comprising a plurality of fuse  
5 box groups including at least two or more fuse boxes to  
detect whether repaired row addresses are applied;

a redundant row predecoder for performing a logic  
operation on an output signal from the fuse box groups to  
selectively activated redundant main wordlines each of  
10 which corresponds to a plurality of redundant sub-  
wordlines; and

a redundant sub-row decoder for classifying the  
output signals from the fuse box groups into group signals  
corresponding to the number of fuse boxes in each fuse box  
15 group and performing a logic operation on the group signals,  
to output a boosting signal for selectively activating the  
plurality of sub-wordlines corresponding to the each  
redundant main wordline,

wherein the boosting signal is disabled only when a  
20 new row address is applied.

2. The row redundancy circuit according to claim 1,  
wherein the redundant row predecoder selectively activates  
the redundant main wordlines when one of fuse boxes in the

fuse box group corresponding to the redundant main wordlines is enabled.

3. The row redundancy circuit according to claim 2,  
5 wherein each fuse box group corresponds to one of the redundant main wordlines, and one of the redundant main wordlines corresponds to  $4 \times N$  (N: the number of fuse boxes in the fuse box group) redundant sub-wordlines.

10 4. The row redundancy circuit according to claim 1, wherein the redundant row predecoder activates a corresponding cell array block when the redundant main wordline is activated, and outputs a boosting control signal for controlling the boosting signal into the  
15 redundant sub-row decoder.

5. The row redundancy circuit according to claim 1, wherein the redundant sub-row decoder disables the boosting signal in response to a signal obtained by predecoding  
20 lower 3 bits of the new row address.

6. The row redundancy circuit according to claim 5, wherein the redundant sub-row decoder comprises:

a redundant boosting controller for classifying the

output signals from the fuse box group array into the group signals corresponding to the number of fuse boxes in each fuse box group and performing a logic operation on the group signals, to output redundant boosting control signals; and

a boosting signal generator for generating the boosting signal in response to the redundant boosting control signal and the predecoding signal of the new row address when the boosting control signal is activated.

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7. The row redundancy circuit according to claim 6, wherein the boosting signal generator comprises:

a mode controller for controlling the generation of the boosting signal depending on the boosting control signal and a control signal which is enabled when a corresponding bank is activated and is disabled when the bank is precharged;

a repair controller for controlling the generation of the boosting signal in response to a predecoding signal of lower 2 bits of the row address and one of the redundant boosting control signals in a repair mode;

a normal controller for controlling the generation of the boosting signal in response to the predecoding signal of lower 3 bits of the row address in a normal mode;

a pull-up controller for performing a logic operation on a second redundant boosting control signal, an output signal from the repair controller and an output signal from the normal controller;

5 a pull-up unit for pulling up an output node in respond to the output signal of the pull-up controller;

a mode selector for pulling down the output node in response to an output signal from the repair controller or the normal controller depending on operation modes by the  
10 mode controller;

a latch unit for latching an signal of the output node; and

a boosting signal output unit for generating a boosting signal in response to the signal of the output  
15 node and the output signal of the latch unit.

8. The row redundancy circuit according to claim 7, wherein the fuse box comprises:

a voltage pull-up unit, connected between a power  
20 voltage terminal and a first node, for pulling up a voltage of the first node in a precharge mode;

a fuse unit, programmed as a predetermined repair address, for pulling down the voltage of the first node when an address is applied other than the programmed repair

address;

a fuse controller for preventing the voltage of the first node from being dropped by the fuse unit in response to a predecoding signal disabled in a precharge mode;

5 an address detector for detecting whether the address applied to the fuse unit is the repair address so that a fuse signal may be outputted depending on a value of the first node when the repair address is applied; and

a fuse signal output unit for outputting the fuse  
10 signal depending on a value of the first node and output signals from the address detector.